

NOTES

THE Kew Committee have appointed Mr. G. N. Whipple, B.Sc., Superintendent of the Observatory. Mr. Whipple's connection with the establishment is of nearly nineteen years standing, he having entered it in January, 1858.

DR. PETERMANN has sent us a map in which he has embodied the discoveries of the English Arctic Expedition. He appears still to maintain his well-known hypothesis of the continuation of the north coast of Greenland towards and beyond the North Pole. He draws the line of the visible horizon of the English Expedition at about fifty nautical miles north of Grant Land, its furthest north point being the 84th deg. of lat., and remarks that north of this line may be either land or sea. Of course no one can contradict this. He has, however, restored President's Land in rather a remarkable position, identifying it apparently with Beaumont's Cape Britannia, to the north of Beaumont's furthest point on the north coast of Greenland. The map will be found a very useful one in studying the route of the expedition, especially as compared with that of the *Polaris*.

CAPT. NARES and the other Arctic officers have been entertained by the Greenwich cadets and by the Royal Naval Club at Portsmouth. Capt. Nares stated that when the whole story of the efforts of the expedition is published, it will be seen that better work could not have been done.

THE constituents of fodder-remains of rhinoceroses and mammoths in Northern Siberia have been examined by several observers, and the conclusion arrived at that these animals lived in the places where their frozen bodies have been found, on plants which are still to be met with in Northern Siberia. New ground for this opinion has been furnished by M. Schmalhausen to the St. Petersburg Academy, who has examined microscopically the constituents of a mass of dark-brown matter extracted from hollows in the teeth of a rhinoceros in the Irkutski Museum. That this was truly the remains of fodder of the animal seemed clear from the appearance and the macerated character of the vegetable substance, of which only the woody and cuticular parts showed a more or less distinct structure. The greater portion of the piece consisted of leaf-remains, with here and there a fragment of stem. For the most part the stem and leaf-fragments were those of monocotyledonous plants, probably of Gramineæ; there were also, in less quantity, leaf-fragments of dicotyledonous plants. Besides leaf-shreds of Coniferæ, there were woody pieces which indicated the existence of *Picea* (*Obovata* ?), *Abies* (*Sibirica* ?), *Larix* (*Sibirica* ?), *Gnetaceæ*, *Betulaceæ*, and *Salicinæ*. If it is scarcely possible to determine certainly the species of a plant merely from some of the wood received in the state indicated, and from the structure of the leaf epidermis, it yet seems unquestionable that these remains must be referred to northern plants and to such as are still partly found in the high north.

MR. COXWELL writing to the *Daily News* in reference to Arctic ballooning, maintains that the ordinary practice of ballooning would be quite unsuitable for the conditions found in the Arctic regions.

M. MORITZ, director of the Tiflis Observatory, makes an interesting communication on the results of an examination of the magnetic instruments there last July by Prof. Smirnoff, of Kasan, who has been engaged during the last six years travelling through to determine the elements of terrestrial magnetism. The instruments employed by Prof. Smirnoff, which cost 300 roubles, were all verified at Kew, and are furnished with microscopes and all the other accessories of the English system. The compass has three needles (No. 4, No. 3, and No. 16), four inches in length, and the mean of the readings of the three needles is the true inclination. At Tiflis there are two compasses long in use, con-

structed according to the old method of Gambey, which are now generally looked upon as inferior instruments. They cost respectively only 165 and 40 roubles. The results of a very careful comparison are these:—Assuming the mean of the indications of the three Kew needles as the true inclination the errors of the instruments were, Kew No. 4, $-0^{\circ}25$; No. 3, $+2^{\circ}45$; and No. 16, $-2^{\circ}22$; the error of the large Gambey being $+0^{\circ}30$, and of the small Gambey $-0^{\circ}09$. M. Moritz remarks that the microscope and detached circle on which the readings are made, and which add so greatly to the price of the English compass, appear to add nothing to the precision with which the inclination is determined, facilities for minute readings of the compass being made counting but little, it being the form of the pivots of the physical axis of the needle which stamps its character on the instrument.

“ON Some Insect Deformities,” by Dr. Hermann A. Hagen, is the title of No. 9, vol. ii., of the *Memoirs* of the Museum of Comparative Zoology, Harvard College, Cambridge, U.S.

WE have received from Herr Schmidt, publisher, Zürich, Dr. Hermann Berge's “Beiträge zur Entwicklungsgeschichte von *Bryophyllum Calycinum*,” and Dr. Gustav Schoch's “Die Schweizerischen Orthopteren.”

THE following German publications have been sent us by Messrs. Williams and Norgate:—“Ueber die Zugstrassen der Vögel,” by J. A. Palmén, of Helsingfors; “Grundzüge der Mikrophotographie,” by Max Hauer; “Sammlung wissenschaftlicher Vorträge von Prof. Wilhelm Förster;” “Die Darwin'schen Theorien und ihre Stellung zur Philosophie, Religion, und Moral,” by Rudolf Schmid.

THE Goldsmiths' Company, whose donation to the Chemical Society we noted last week, have voted 500*l.* in aid of the fund for extending Edinburgh University buildings. It is stated that this Company spends annually 6,000*l.* for educational purposes alone. We wish the other City Companies would follow such a good example.

THE following were elected office-bearers of the Royal Society of Edinburgh on Monday last:—President, Sir William Thomson; Vice-Presidents, Rev. Dr. Lindsay Alexander, Bishop Cotterill, Sir Alexander Grant, Prof. Kelland, Lord Neaves, and David Stevenson; General Secretary, Prof. Balfour; Secretaries to Ordinary Meetings, Professors Tait and Turner; Treasurer, David Smith; Curator of Library and Museum, Prof. MacLagan; Members of Council, Prof. Crum Brown, Dr. James Bryce, Alexander Buchan, Dr. Matthews Duncan, Dr. A. Fleming, Dr. T. Harvey, D. Milne Home, Prof. McKendrick, Dr. C. Morehead, Sir C. Wyville Thomson, Dr. R. H. Traquair, and Dr. Robert Wyld.

THE next meeting of the French Association for the Advancement of Science will take place, as we have already intimated, at Havre in the end of August, 1877, under the presidency of Dr. Broca. A local committee has been already formed at Havre under the presidency of M. Mazurier, the mayor. At the first meeting M. Gariel, the secretary of the committee, suggested many useful and interesting experiments to be made in the Seine or the sea. Special efforts will be made to procure a large attendance of English *savants* and members of the British Association. It is reported that a special deputation will be sent to the Dublin meeting of the British Association. The place of meeting for 1878 has not yet been determined upon, but it will probably be Versailles or Paris.

THE *Times* of Monday contains a journal kept by the Rev. Mr. Lawes during a voyage from Port Moresby to China Straits, New Guinea. It contains a good many new facts of interest.

At Hood's Bay they sailed up a considerable river, and near the coast found a large village, regularly laid out in streets and squares, scrupulously clean, with gardens and carefully cultivated flowers. Canoes of large size and excellent make they saw being hewed out with stone hatchets. At a lagoon at Cape Rodney a regular lake village was found, the lagoon leading up to a considerable river. Near Table Point a large canoe "manned" by at least twenty-one women, came alongside; it is reported at Port Moresby, and all along the coast, that there is a village of women somewhere near Amazon Bay.

AT the last meeting of the French Geographical Society, the president, M. Malte Brun, intimated that the Council General of the Seine had voted a sum of 2,000 francs to assist M. Largeau in his exploration of the Sahara. M. Largeau left on November 19 for Algiers, whence he will proceed to Constantine, Tuggurth, and Central Sahara. The subscription on his behalf is proceeding. The Geographical Council of Lyons has voted a small subsidy of 12/, and the Municipal Council of Lyons will send him, within a very few days, a considerable donation. M. McIldin, a rich landed gentleman, has offered to the Society to maintain during one year any traveller approved by the Society. The offer was accepted with thanks. On December 20 the general secretary will deliver a lecture on "The Progress of Geography during 1876," and on the following day the annual banquet will take place at the Grand Hotel.

AT the Geographical Society on Monday night papers were read on the results of Col. Gordon's expedition in Central Africa, from General Stone, the Rev. E. J. Davis, and Signor Gessi. Sir Rutherford Alcock announced the death of an African missionary, Mr. Redman, who, by his explorations, had materially helped subsequent travellers, and who first suggested that there was a great system of lakes in Central Africa.

A GREAT extension of the medical department of the University of Heidelberg has been in progress for some time. Large additions to the Medical School and the Hospital attached to it have been made, and when completed, as it will be shortly, this institution will be one of the most complete in Europe. Every provision has been made for scientific investigation in connection with the healing art in all its departments.

THE *Archiv für Anthropolologie* (ix. 173) contains a paper by Herr L. Lindenschmidt, in which he pronounces his conviction that the drawings upon the fossil bones found in the Thayingen Cave are spurious and the result of intentional deception. These drawings, which represent a bear, a fox, and a stag, were generally admired in scientific circles in 1874 (when they were found) as being amongst the most perfect specimens of the kind; they also led to the supposition of the highly-civilised state of the ancient cave inhabitants. Herr Lindenschmidt produces evidence to the effect that precisely the same drawings are contained in a little work by Leutemann, "Die Thiergärten und Menagerien mit Ihren Insassen," which was published in 1868, i.e. six years before the discovery of the cave near Thayingen. As the work in question had a very wide circulation in Germany the inference drawn is obvious.

A NOTICE in the *Ostsee Zeitung* accounts for the frequent deficiencies in the aroma of foreign cigars by announcing that from Guben whole wagon-loads of dried cherry-leaves are weekly exported for the manufacture of "tobacco."

A SUCCESSFUL *soirée* of the Manchester Scientific Students' Association was held last Friday, when Prof. Williamson gave an address on Insectivorous Plants.

A VERY fine new university building has been erected at Kiel, one marked peculiarity of which is that it has no "cancer," or prison, which hitherto, it seems, has been an invariable appendage to German universities.

THERE met in Berlin, a few days ago, a German Government Commission whose business it is to look after the moors and marshes of Germany. They resolved to establish an experimental station at Bremen, to be opened on April 1 next year, drew up a plan for obtaining statistics and a topography of moors, and made arrangements for the complete canalisation of the moors in the Duchy of Bremen. The labours of the Commission will include the whole of Germany.

THE directors of the Swedish Government railways have turned their special attention to the frequent occurrence of colour-blindness amongst their engine-drivers and other officials. Prof. Holmgren has lately examined the whole staff of the Upsala-Gefle Railway, and amongst the 266 persons examined has found no less than eighteen who suffered from this defect, and who therefore were utterly useless and unfit for railway service. This investigation proves that cases of colour-blindness are far more frequent than is generally supposed, and that our railway companies would do well to follow the example of the Swedish State railways.

THE *Kölnische Zeitung* of the 14th inst. declares that the recent sudden cold was a perfectly abnormal meteorological phenomenon, and all the more so since it did not only visit a part but nearly the whole of Europe. Reports of heavy snowstorms have come from the whole of North Germany, Austria, Servia, and Roumania, and the temperature had fallen below freezing in all these countries as well as in Western France, Italy as far south as Rome, and the whole of European Turkey. In Hungary the cold reached 13° C. Violent gales were raging in the Black Sea, the Adriatic, and the Baltic. In another article, dated from the Teutoburg forest, the paper reports that the whole of that district is snowed up, and a valuable crop of vegetables, beetroot, &c., has been destroyed by the cold.

A MONS. MÉNIER, of Bordeaux, has invented a new contrivance for the steering of balloons. The mechanism is placed behind the car, and by a clever arrangement of network acts upon a belt which encircles the body of the balloon, extending about four or five degrees above and below a horizontal plane through its centre—its equator, so to say. The rudder is plane, and can be used as a sail. The balloons are said to move obliquely upwards and downwards and also sideways, according to the position of the rudder. The sideway motion is very likely facilitated by changing the position of ballast. One circumstance, which may be of special practical use, is that a balloon provided with this new apparatus, when falling to the ground, can be made to touch the earth's surface very obliquely and thus avoid any sudden shock, and at the same time facilitate a safe anchoring.

HERR EDWARD TREWENDT, publisher, Breslau, has issued the prospectus of a New Encyclopædia of the Natural Sciences, which will include all departments of science. The first part will appear on January 1, 1878.

MORE than 18,000 francs have been already collected for the erection of Arago's statue at Perpignan.

THE additions to the Zoological Society's Gardens during the past week include a Bonnet Monkey (*Macacus radiatus*) from India, presented by Mr. E. F. Mathews; a Slender-billed Cockatoo (*Licmetis tenuirostris*) from South Australia, presented by Mr. Stevens; a Gannet (*Sula bassana*), European, presented by Mr. R. H. W. Leach; a Peregrine Falcon (*Falco peregrinus*), captured at sea, presented by Mr. A. Whyte; a Grivet Monkey (*Cercopithecus griseo-viridis*) from Nubia, an Indian Leopard (*Felis pardus*) from India, a Hooded Crane (*Grus monachus*) from Japan, a Globose Curassow (*Crax globicera*) from Central America, deposited; an Indian Muntjac (*Cervulus muntjac*), a Japanese Deer (*Cervus sika*), born in the Gardens.